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U.S. DEPT. OF AGRICULTURE

REPORT NO. 4

JAN 25 974

ROGULLIMENT SECTIONS CURRENT SERVEL RECORDS

Cotton Fiber and Processing Test Results





Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38117 September 29, 1972

Discussion of Test Results

Cotton Division laboratories of the Agricultural Marketing Service report that average values for all short staple samples tested from the Southwest to be slightly longer, finer and weaker than through the same date last year. Shirley Analyzer nonlint content is higher. Yarns spun from these samples are stronger, with lower appearance grades and more imperfections than last season. Average spinning potential yarn number is higher.

Southwestern medium staple samples show about the same fiber length and fineness compared with this period last year. Fiber strength at zero gage is weaker. Picker and card waste is higher than last year at this time. Yarns spun from these samples show about the same strength and appearance grades. Yarn imperfections were greater than last year. Average spinning potential yarn number is higher than a year ago.

Only one lot of long staple cotton has been received from the Southeastern production area to date.

This is the fourth of a series of reports of fiber and processing test results from the 1972 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, Crop of 1971", April 1972. These reports are published by the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.

Averages of fiber and processing tests from selected gin points in the United States through September 22, 1972

Table 1. -- Cotton:

3 Yarn No. Potent. Spin. 28 59 99 73 Processing test results Appear-Imperfections 22s Carded Yarn 52 83 20 20 17 17 83 Yarn quality 122 108 ance 120 Skein str. Lbs. 103 107 123 114 131 おあ P & C waste Pct. *16.1 19.1 19.1 0.9 nonlint Pct. 0.0 0.4 4.2 0.0 0.0 SA Fiber strength G/tex gage 1/8" 8 2 22 22 52 Fiber test results Zero gage Mpsi 8283 88 82 88 fine-Mike ness Rdg. 4.00 4.6 4.4 4.1 50/2.5 Pct. unif. 43 # 529 中に Fibrograph Inches 2.5% 9.3 span 1.06 1.16 1,11 tested Lots No. 98 23 4 Staple group Area, and Crop year Medium Staple: Southwest Long Staple: Southeast Southwest Short Staple: 1971 1972 1972 1971 1971

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4(22s)

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Significant dif-

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Comber waste and combed yarn data

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Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples. Based on a limited number of samples of modal quality

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1972

	Spin. Poten- tial		SI SI		94	43	64	4	51	59
Processing Test Results - Carded Yarns	Imprfect'ns	8s or 22sor 74 tx 27 tx	ଥ		30	11	53	24	18	18
	Imprf	8s or 74 tx	읾		64	29	20	39	32	31
	ance	22sor 27 tx	읾		110	120	120	120	120	120
	Appearance Index	8s or 74 tx	N _O		120	130	120	120	130	120
	Elongation	8s or 22s or 74 tx 27 tx	Pet		6.1	5.9	6.1	6.1	6.5	6.3
		8s or 74 tx	Pet		7.1	8 • 9	6.8	7.0	7.2	7.5
	Strength	22s or 27 tx	rps		84	95	66	95	103	107
		8s or 74 tx	Tps		ENT 274	ENT 305	ENT 317	ENT 312	ENT 326	
	P&C Waste		Pet		95 PERCENT 6.7 27	99 PERCENT 4.6 305	100 PERCENT 6.4 31	99 PERCENT 5.5 312	87 PERCENT 5.4 326	100 PERCENT * 5.8 347
	Color Raw Stock P & C	Yel	ଥ		0 4	9	10	5	4 80	10
		Gra	SI SI		4	-	m	2	2	m
	S.A. Non- lint		Pet		2.8	2.3	3.9	2.1	2.2	3.2
Fiber Test Results	Elon- gat'n 1/8"		Pet		611 7.4	57	LX571 6.3	57	57	LX571 6.5
	Fiber Strength	1/8" Gage	G/tex		LANKART 20	LANKART 21	LANKART 21	LANKART 20	LANKART 22	L ANK ART 22
Fiber		Zero	Mpsi		76	86	88	88	84	88
	Mike		Rdg		4.6	4.4	3.5	3.8	4.2	4.6
	Digital brograph	Unif	Pet		43	4	44	4	45	45
	Digital Fibrograph	2.5% span	티		0.95	0.95	0.98	0.94	0.99	33 1.03
		Stple	32s	AREA	31	30	32	31	32	33
Production Area, Classification & Sample Number Grade No Name & Code			4		31	32	31	41	45	
			SOUTHWEST SOUTH TEXAS	TAFT 3 SLM LT SP 42	CENTRAL TEXAS FORNEY 1 MID	ITASCA 1 MID LT SP	MCK INNEY I MID	TEMPLE 1 SLM	WACO 1 SLM LT SP	

* 100 percent selected for tests, less than 100 percent in the area.

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1972

	Spin.	Foten- tial	No		61	57	10	28
	Imprfect'ns		No		14	=	22	14
arns		22s or 27 tx	No		20	14	56	18
arded Y	ance	50s or 12 tx	No		100	1 00	06	100 18
lts - C	Appearance Index	22s or 27 tx	No		130	130	120	130
st Resu	tion	50s or 12 tx	Pct		4.3	4.2	5.2	3.9
Processing Test Results - Carded Yarns	Elongation	22s or 50s or 22s or 50s or 22s or 50s or 22s or 50s or 27 tx 12 tx	Pct		5.9	5.6 4.2	6 • 3	5.4
Proces	ıgth	50s or 12 tx	Lbs Lbs Pct		34	31	37	62
	Strength	22s or 27 tx	I.bs		ENT 98	ENT 94	100	ENT 95
	S.A. Raw Stock P & C	Waste 22s or 50s or 22s or 50s or 22s or 50s or 22s or 50s or 27 tx 12 tx 27 tx 12 tx 27 tx 12 tx	Pct		90 PERCENT 6.6 98	70 PERCENT 5.7 94	85 PERCENT 5.7 100	100 PERCENT 3 5.8 95
	Color w Stock	Non- Lint Gra Yel	8		6	4	4	3 10
	Raw	Gra	읽		4	7	m	7
	S.A. Non- Lint		Pct		3.4	2.3	3 2.0	2.6
r s	Elon-	gat'n 1/8"	Pct		LE 21: 6.6	LLE 7A 6.4	LE 21.	LLE 7A 6.1
Fiber Test Results	rth	1/8" Gage	G/tex		STONEVILLE 213 21 6.6 3.4	STONEVILLE 7A 21 6.4 2.3	STONEVILLE 213 22 7.4 2.0	STONEVILLE 7A 21 6.1 2.6
ber Tes	Fiber Strength	Zero Gage	Mpsi		S 83	. S 88	.s .s	.S 06
Fî		Mike	Rdg		5.0	5.2	4.0	5.1
	haz	4	Pct		4 د د	44	44	44
	Digital Fibrograph		듸			1.01		1.10
-		Stple 2.5% span	32s	4	34 1.07	32 1.	41 34 1.07	34 1.
ga, n		St	m	AREA	51 34		76	41 34
n Are	Tumber	Code			ī	2 1ST		
Production Area,	Sample Number Grade No Grade			SOUTHWEST SOUTH TEXAS	AUSTWELL 3 LM	CORPUS CHRISTI 3 MID LT SP 32	CENTRAL TEXAS BATESVILLE 3 SLM	NEEDVILLE 2 SLM

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1972

	Spin. Poten-	tial	No			73
	Imprfect'ns	Comber 22s or 50s or 22s or 50s or 22s or 50s or 22s or 50s or Waste 27 tx 12 tx 27 tx 12 tx 12 tx	N			29 16
Yarns	Imprf	22s or 27 tx	No			30
Carded	Appearance Index	50s or 12 tx	8			28
ults -	Appea Ind	22s or 27 tx	No 			100
est Res	ation	50s or 12 tx	Pct			4.8 5.1
Processing Test Results - Carded Yarns	Elongation	22s or 27 tx	Pct			6.6
Proces		50s or 12 tx	SdI			0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Strength	22s or 27 tx	Lbs		CENT	1114
,	P&C and	Comber 22s or 50s or 50s or 22s or 50s or 22s or 50s or 20s or 50s or Waste 27 tx 12 tx 27 tx 12 tx 27 tx 12 tx	Pet		100 PERCENT	9.1 11 ⁴ *19.1 131
	Color Raw Stock	Yel	욁			4
	Col Raw	Gra	읡			m
	Elon- S.A.	Lint	Pet			4.2
ts	Elon- S.A.	1/8"	Pet		310	25 6.0 4.2 3
Fiber Test Results	Fiber	1/8"	G/tex		COKER	25
Fiber T	Stre	NC	Mpsi			88
		Mike	Rdg			4.1
	al aph	Unif.	Pct			† †
	Digital Fibrograph	2.5%	al al			1.11
		Stple 2.5%	32s			35
Area	mber	1 1		AREA		51
Production Area,	Sample Number	Grade Name & Code		SOUTHEASTERN AREA	ALABAMA ORRVILLE	M
		8		SOU	ALA	L LIM

* Comber Waste and Combed Yarn Data